REMARKS

Claims 1-30 and 32 are pending and stand rejected.

Claim 1 was amended to place into the claim the term " angular multichromatic characteristics", as suggested by the Examiner on page 8 of the April 30, 2008 Office Action. This amendment is supported by original disclosure on page 4, paragraph [0019], lines 3 and 4 of the original Specification.

Claim 2 was amended to state that the observed color change is based solely on the change of viewing angle. This amendment is supported by original disclosure at page 4, paragraph [0019], lines 6-8.

Claim 12 was amended to remove the term "substantially".

Claim 14 was amended to remove the term "substantially" and substitute in its place the limit of 0.1 or less. This amendment is supported by original disclosure in paragraph [0040], lines 13 and 14 (page 10).

New claim

It is believed that no new matter is added by these amendments.

Applicant notes that previous 35 U.S.C. §102 rejections have been withdrawn.

35 U.S.C. §112

Claim 12 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 12 has been amended to remove the term "substantially".

Claim 14 stands rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 has been amended to remove the term "substantially", and substitute in its place "0.1 or less".

New claim 35 is supported by original disclosure on page 6, paragraph [0027] line 4.

It is believed that these amendments overcome the 35 U.S.C. §112 rejections.

35 U.S.C. §103

Claims 1-30 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kito et al. (US 5,585,425), as evidenced by http:hyperphysics.phy-astr.gsu.edu/hbase/tables/indrf.html. The Kito reference fails to teach or suggest every limitation of Applicant's claims, and therefore fails to present a *prima facie* case of obviousness. Specifically, the Kito reference fails to teach or suggest a) Applicant's claimed angular multi-chromatic characteristics, b) a thickness of each layer of greater than 0.1 to 100 mm, c) a thickness of at least one light transmitting layer of from 1 to 100 mm, d) a principal color of each layer, and e) a color change based solely on the viewing angle.

Angular multi-chromatic characteristics

Applicant has amended claim 1 to include the term "angular multi-chromatic characteristics" in describing the behavior of the claimed article. As the Examiner noted on page 8, lines 1-3 of the current April 30, 2008 office action "Kito does not recognize Applicant's angular multi-chromatic characteristics". Applicant believes that the Kito reference failed to recognize any angular multi-chromatic characteristics, since the Kito reference failed to describe all of the factors needed to observe such an effect – thickness of each layer of greater than 0.1, a principal color of each layer, and a thickness of at least one light transmitting layer of at least 1 mm.

Applicant agrees with the Examiner that the Kito reference fails to teach or suggest said angular multi-chromatic characteristics, therefore failing to teach or suggest all of Applicant's claim limitations, resulting in a failure to present a *prima facie* case of obviousness.

Thickness of each layer of greater than 0.1 to 100 mm

The Kito reference teaches a thin coating of a thermochromatic composition. (Col 11, lines 57-63) The coating thickness is described as from 2-100 micron (Col. 12, line 12). The Kito examples all have a thermochromatic coating of 15 to 20 microns. These are all below Applicants claims that each layer has a thickness of greater than 0.1 to 100 mm. (0.1 mm = 100 microns). The Kito disclosure and all Examples definitely teach away

from Applicant's claims, and certainly would not motivate one of ordinary skill in the art to practice Applicant's claims.

The Examiner contends that the thickness is an optimizable feature, since Applicant fails to disclose any criticality with respect to the claimed thickness. Applicant respectfully disagrees. The reason the Kito reference sets an upper limit at 100 microns, is due to practical limitations of coating technology of a solvent-based coating (Col. 11, 57-53) and in order to produce a uniform coating (Col 12, line 25). Kito uses a coating, as the important feature is looking at the large surface of the object – rather than the edge. Applicant's invention is not to a coating, which produces too thin a layer, but instead relates to the angular multi-chromatic effect seen at the edge of a material. When a layer of the article is too thin – especially the light transmitting layer, it is very difficult to see the edge. That is why the light-transmitting layer needs to be even thicker – from 1 to 100 mm. (see below)

Further, according to the MPEP 2144.05. only result-effective variables can be optimized. The Kito reference fails to recognize Applicant's angular multi-chromatic characteristics or geometric multi-chromatic characteristics, and thus such effects were not recognized as result effect by Kito, and this un-recognized effect cannot be optimized.

Thickness of at least one principally-colord light-transmitting layer of from 1 to 100 mm. Applicant's claims require that the light transmitting layer be from 1 to 100mm thick. This is to provide an edge large enough to see the angular multi-chromatic characteristics of the present invention. In the Kito reference, there are 2 layers that may be light transmitting (or may be opaque):

A. The thermochromatic layer above the trigger temperature is transparent, and may possible be colored (Col. 12, lines 49-53). However, as noted above, this layer is at most 100 microns in thickness (and in the examples 15-20 microns). 100 micron (0.1 mm) is ten-fold below the thickness required by Applicant's claims for the light-transmitting layer. Thus Kito's thermochromatic layer falls does not teach or suggest Applicant's claimed light transmitting layer.

B. The substrate layer: The substrate layer of Kito is described in Col. 13, lines 14 – 27. It can be either transparent or opaque. Transparent substrates are described by chemistry – with no mention of any coloring. Opaque or semi-transparent substrates are described by chemistry, with mention of "above mentioned resin colored or opacified with pigment". Note: in Kito only the opaque or semi-transparent substrate is mentioned as possibly having a color. Both of the possible substrates described in Kito fail to teach or suggest Applicants principal-colored light transitting layer – but rather teach away. A non-colored transparent substrate would fail to have a principle color, while a colored opaque substrate would not be light-transmitting. Thus Kito's substrate layer falls does not teach or suggest Applicant's claimed principal-colored light transmitting layer.

The Kito reference could have mentioned coloring of a transparent substrate, had that been anticipated, but instead the reference specifically omits all references to color for a transparent substrate, but specifically mentions color only for an opaque substrate.

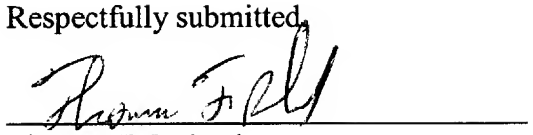
A color change based solely on the viewing angle. In claim 2, Applicant claims an article having angular multi-chromatic characteristics as the color-changing mechanism. The Kito reference describes a thermo-chemical reaction producing a color change.

Claims 22 and 24-26 stand rejected over a Kito disclosure of a solvent (such as acetone) used between the thermochromic layer and substrate layer. Applicant would point to Kito, Col 11, line 62 – stating that solvents used in the coating are completely removed by drying – thus they no longer exist in the article.

Conclusion

The reference cited, fails to teach all of Applicant's claim elements, and therefore fail to present a *prima facie* case of obviousness over Applicant's claims. For the above reasons the present claims are believed by the Applicant to be novel and unobvious over the prior art, thus the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,



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